Small Business Innovation Research/Small Business Tech Transfer

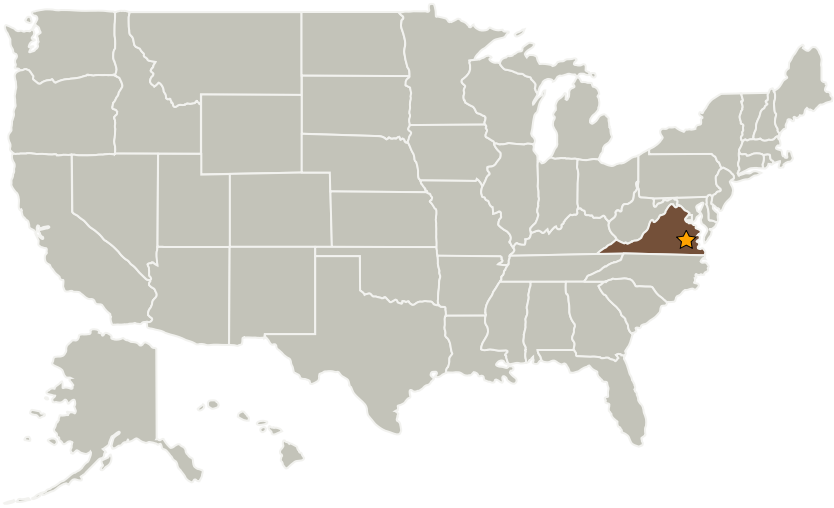
Nanocomposite for Radiation Shielding, Phase I

Completed Technology Project (2005 - 2005)

Project Introduction

NASA's Advanced Extravehicular Activity (EVA) program requires the need for materials that can protect astronauts and spacecrafts from ionizing radiations such as low and high energy X-rays. Currently, lead and lead-based material are used to fabricate shields not only for X-rays but for other types of radiation as well. Lead is heavy and toxic. In this Phase I project, MMI proposes to develop a polymer composite that utilizes a nanocrystalline heavy metal salt for radiation shielding.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Langley Research Center(LaRC)	Lead Organization	NASA Center	Hampton, Virginia
Materials Modification, Inc.	Supporting Organization	Industry Small Disadvantaged Business (SDB)	Fairfax, Virginia

Primary U.S. Work Locations
Virginia

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Langley Research Center (LaRC)

Responsible Program:

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Ramachandran Radhakrishnan

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.5 Radiation
    - TX06.5.3 Protection Systems